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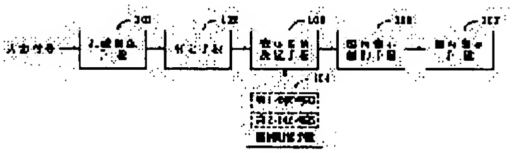
(54) DISPLAY DEVICE FOR GAME MACHINE AND GAME MACHINE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a game machine with a display device which can show various predictive displays such as a reach (one step before prize completion) action and information on a possibility of a jackpot without increasing the kind and the number of patters used in the game or without complicating the display control of patterns.



SOLUTION: Whether a random number generated from a random number generating means 101 is a prescribed one or not is judged by a judging means 102. Based on the result of the judgment, a first pattern to be displayed is decided by a first displayed pattern deciding means 103 among a first group of pattern indicating that a player is under such a condition that profits are given to the player. And according the decided first symbol, a second pattern to be displayed is decided among a second group of symbols indicating the possibility of the condition under which the player will be given profits. A control means 106 displays the decided second pattern on a pattern display means 107, and displays the first pattern after that. As the second pattern is displayed first is this way, the player is given information on the first pattern to appear next and the possibility of appearance of the pattern.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention relates to the display for games used for game machines, such as a pachinko game machine and a slot machine, and the game machine (a pinball machine, and TV game machine besides a slot machine are included) which applied the principle of this display.
[0002]
[Description of the Prior Art] For example, in a kind of pachinko game machine of a pinball machine, although there was a mechanical display using a rotation reel conventionally as a pattern display means of the game which can give a game person profits when the pattern displayed became the combination of a predetermined pattern, in recent years, many electric displays, such as a liquid crystal display in which various stage effects are possible, are used. Moreover, also in the game machine of the slot machine which does not use a game ball, and others, not only the mechanical display by the rotation reel but the electric display by liquid crystal or CRT is used.
[0003] Such an electric display enabled the impossible display in the mechanical display. For example, the count of Kaisei of the adjustable winning-a-prize ball equipment changed into the Kaisei condition advantageous to a game person when an adjustable display is turned off in the combination (great success) of a specific pattern, Express the number of the game balls which won a prize of adjustable winning-a-prize ball equipment etc. as real time, or Display the background of the screen which displayed the specific pattern in order to direct great success more gaily in a usually different color tone from the time, or By displaying the display of the pattern in the case (the so-called reach condition) of being becoming it a great success, if a new character different from the pattern (specially pattern) used for a game is made to appear or one more specific pattern is located in a line as a thing different from the usual actuation It became possible [performing the display (production) which raises a game person's interest] to make a game person recognize that great success is approaching etc.
[0004] Especially production actuation useful although a game person's interest is raised is a pattern fluctuation display with the above "a reach condition", and is also called "reach action." When this reach action starts, a game person will expect the appearance of great success paying attention to the display of a display. As an example of reach action, the fluctuation (adjustable display) rate of the pattern displayed is usually changed compared with the time, or changing fluctuation time amount of a pattern etc. occurs, and great success may appear 100% by specific reach action. That is, such reach action is a display to which the appearance of great success is made to spring up in a game person beforehand.
[0005]
[Problem(s) to be Solved by the Invention] However, although reach action by the display means of the conventional game machine is the comparatively simple display of extent of changing the fluctuation velocity and time amount of a pattern and makes a game person sure of the appearance of great success, since great success does not necessarily surely appear, it may betray expectation of a game person and may spoil interest on the contrary. Moreover, although a pattern is making another pattern (character) appear and performing reach action is known above specially, it does not pass over this to a simple pattern display, and it does not display the information whether great success appears with the possibility of which about. Anyway, by the conventional simple reach action, it is tended to get a game person bored and the game tends to become monotonous.
[0006] Then, although it is possible to use the pattern for games (specially pattern) displayed with a display means, and to perform a reach action display in the combination of those special patterns, the class of pattern

has a limit specially from regulation of the statute about a game etc., and apart from the display for the usual games, the number or class of pattern cannot be increased, so that a reach action display is realized. Moreover, even if it is able to increase, in order to set up the combination of the pattern used for the above omen action indication other than the combination of the pattern used for an original game, the problem that the display control of a pattern makes it complication specially beyond the need is also produced.

[0007] Therefore, the purpose of this invention is offering the display for games which includes an omen display like reach action to the information whether great success appearing with the possibility of which about, and can be realized to Oshi, without increasing the class and number of patterns which are used for an original game, or complicating the display control of those patterns.

[0008] Another purpose of this invention is offering the game machine which adopted the principle of the above-mentioned display for games.

[0009]

[Means for Solving the Problem] A random-number-generation means to generate a random number as the 1st mode of this invention according to a predetermined input signal, A judgment means to judge whether the random number generated from this random-number-generation means is a predetermined value, A pattern storage means by which the 2nd pattern group showing the probability which will be in the condition that profits are given to the 1st pattern group and game person showing being in the condition that profits are given to a game person was matched and stored, Based on the judgment result of said judgment means, determine the 1st pattern which should be displayed out of the 1st pattern group stored in said pattern storage means, and it corresponds to the 1st determined pattern. An indicator-chart shank decision means to determine the 2nd pattern which should be displayed out of the 2nd pattern group stored in said pattern storage means, A pattern display means to display the 1st and 2nd patterns determined by this indicator-chart shank decision means, After displaying the 2nd pattern determined by said indicator-chart shank decision means, the display for games equipped with a pattern display-control means to control said pattern display means to display said 1st determined pattern is offered.

[0010] A random-number-generation means to generate two random numbers as the 2nd mode of this invention according to a predetermined input signal, A judgment means to judge whether the 1st random number generated from this random-number-generation means is a predetermined value, A pattern storage means by which the 2nd pattern group showing the probability which will be in the condition that profits are given to the 1st pattern group and game person showing being in the condition that profits are given to a game person was stored, The 1st indicator-chart shank decision means which determines the 1st pattern which should be displayed based on the judgment result of said judgment means out of the 1st pattern group stored in said pattern storage means, The 2nd indicator-chart shank decision means which determines the 2nd pattern which should be displayed based on the judgment result of said judgment means, and the 2nd random number generated from said random-number-generation means out of the 2nd pattern group stored in said pattern storage means, A pattern display means to display the 1st and 2nd patterns determined by said 1st and 2nd indicator-chart shank decision means, After displaying the 2nd pattern determined by said 2nd indicator-chart shank decision means, the display for games equipped with a pattern display-control means to control said pattern display means to display the 1st pattern determined by said 1st indicator-chart shank decision means is offered.

[0011] Here, although the judgment result of the judgment means which is one of the conditions for determining the 2nd pattern is the case where the 1st random number is a predetermined value, or when that is not right, it includes the 1st pattern determined corresponding to the value of the 1st random number as for the any in the above-mentioned judgment result. And the 2nd pattern will be determined according to the value of this 1st pattern and the 2nd random number.

[0012] Let the 2nd pattern of the above be the combination of two or more patterns in the 3rd mode.

[0013] In the 4th mode, a pattern display-control means shifts some of the display stages, and displays the 2nd pattern.

[0014] In the 5th mode, the 2nd indicator-chart shank decision means continues and determines the same pattern until it will be in the condition of giving a game person profits.

[0015] In the 6th mode, the 2nd pattern shall disappear, just before the condition that profits are given to a game person by the 1st pattern group is shown.

[0016] In the 7th mode, the 1st and 2nd random numbers are generated corresponding to an input signal different, respectively.

[0017] A random-number-generation means to generate a random number as another mode of this invention according to a predetermined input signal, A judgment means to judge whether the random number generated from this random-number-generation means is a predetermined value, A pattern storage means by which the 2nd pattern group showing the probability which will be in the condition that profits are given to the 1st pattern group and game person showing being in the condition that profits are given to a game person was matched and stored, Based on the judgment result of said judgment means, determine the 1st pattern which should be displayed out of the 1st pattern group stored in said pattern storage means, and it corresponds to the 1st determined pattern. An indicator-chart shank decision means to determine the 2nd pattern which should be displayed out of the 2nd pattern group stored in said pattern storage means, A pattern display means to display the 1st and 2nd patterns determined by this indicator-chart shank decision means, After displaying the 2nd pattern determined by said indicator-chart shank decision means, the game machine equipped with a pattern display-control means to control said pattern display means to display said 1st determined pattern is offered.

[0018] A random-number-generation means to generate at least two random numbers as another mode of this invention according to a predetermined input signal, A judgment means to judge whether the 1st random number generated from this random-number-generation means is a predetermined value, A pattern storage means by which the 2nd pattern group showing the probability which will be in the condition that profits are given to the 1st pattern group and game person showing being in the condition that profits are given to a game person was stored, The 1st indicator-chart shank decision means which determines the 1st pattern which should be displayed based on the judgment result of said judgment means out of the 1st pattern group stored in said pattern storage means, The 2nd indicator-chart shank decision means which determines the 2nd pattern which should be displayed based on the judgment result of said judgment means, and the 2nd random number generated from said random-number-generation means out of the 2nd pattern group stored in said pattern storage means, A pattern display means to display the 1st and 2nd patterns determined by said 1st and 2nd indicator-chart shank decision means, After displaying the 2nd pattern determined by said 2nd indicator-chart shank decision means, the game machine equipped with a pattern display-control means to control said pattern display means to display the 1st pattern determined by said 1st indicator-chart shank decision means is offered.

[0019]

[Function and Effect] According to the 1st mode, it judges whether the random number generated from the random-number-generation means is a predetermined value, and the 1st pattern which should be displayed out of the 1st pattern group showing an indicator-chart shank decision means being in the condition that profits are given to a game person is determined based on the judgment result. Since the 2nd pattern group showing the probability which will be in the condition that profits are given to a game person, on the other hand is stored in the pattern storage means corresponding to the 1st pattern group, an indicator-chart shank decision means determines the 2nd pattern which should be displayed out of the 2nd pattern group corresponding to the 1st pattern determined as mentioned above. And the 1st pattern is displayed after a pattern display-control means displays the 2nd pattern determined as the pattern display means as mentioned above. Since the 1st pattern displayed after the 2nd pattern is equivalent to the 2nd pattern concerned at this time, when a game person looks at the 2nd pattern displayed previously, he can predict in what kind of combination (pattern) the deactivate indication of the 1st pattern is carried out after that.

[0020] That is, when the 2nd pattern is previously displayed by matching the 2nd pattern with 1 to 1 to the 1st pattern, the 1st pattern displayed on a degree is a specific pattern (put together) in which it corresponded with the 2nd pattern concerned, and it turns out that the probability to appear is 100%. For example, when the 2nd pattern in which "great success" is made to spring up beforehand is displayed, it reports that the probability (reliability) for the 1st pattern to be "becoming it a great success" is 100% to a game person.

[0021] Moreover, the 2nd one pattern may be matched with two or more 1st patterns. For example, since the 1st pattern displayed on a degree is either of 2 sets when the 2nd one pattern is equivalent to the 1st two pattern and the 2nd pattern is displayed previously, the probability to appear is 50%. When one side of 2 sets of 2nd patterns corresponding to the 1st pattern of "great success [therefore,]" is displayed, a game person can recognize that "great success" appears in 50% of reliability after that.

[0022] As mentioned above, a game person becomes, without betraying it completely while being able to know how much possibility of being in the condition that profits are given by matching and recognizing the 2nd pattern displayed previously and the 1st pattern displayed after that there are and raising the expectation for game conditions, such as great success. Moreover, the game person who memorized the relation of the pattern of the 2nd pattern group and the pattern of the 1st pattern group which are displayed can acquire the sense of superiority of knowing the preliminary announcement eye which others do not understand compared with the game person who is not so. On the other hand, since the game person who does not know it is also going to find out the above-mentioned relation, the interest of a game increases.

[0023] According to the 2nd mode, a random-number-generation means generates two random numbers. And it judges whether the 1st random number is a predetermined value with a judgment means, and the 1st pattern which should be displayed out of the 1st pattern group showing being in the condition that profits are given to a game person by the 1st pattern decision means is determined based on the judgment result. Furthermore, based on the 1st pattern determined by the above-mentioned judgment result, and the 2nd random number generated from the random-number-generation means, the 2nd pattern which should be displayed out of the 2nd pattern group showing the probability which will be in the condition that profits are given to a game person by the 2nd pattern decision means is determined. From the 1st pattern group determined according to the value of the 1st random number, it is choosing the 1st pattern according to the value of the 2nd random number, and, specifically, the 2nd target pattern is determined. And a pattern display-control means displays the 1st pattern, after displaying this 2nd determined pattern on a pattern display means.

[0024] In this 2nd mode, since the 2nd pattern displayed before the 1st pattern is determined at random out of the 2nd pattern group corresponding to the 1st pattern concerned, a game person can predict once in what kind of combination (pattern) the deactivate indication of the 1st pattern is carried out after that, when the 2nd pattern displayed previously is seen. That is, since two or more 2nd patterns are matched to the 1st one pattern, when the 1st specific pattern is determined, in the case of 1 to 2, the 2nd pattern is determined at random by 50% of probability, for example. And when the 2nd determined pattern is displayed, the 1st pattern displayed on a degree can be predicted. When the 2nd one pattern is matched only with the 1st one specific pattern and the 2nd pattern concerned is displayed here, the probability for the 1st pattern displayed on a degree to turn into a specific pattern is 100%. When the 2nd pattern corresponding to the 1st pattern of "great success [therefore,]" is displayed, a game person can recognize that "great success" appears in 100% of reliability after that.

[0025] However, when a certain 2nd pattern is matched with two or more 1st patterns, for example, when the 2nd pattern concerned is displayed in the case of 1:2, the probability for the 1st pattern displayed on a degree to turn into a specific pattern is 50%. When the 2nd pattern in which therefore, "great success" and the other pattern are made to spring up beforehand is displayed, a game person can recognize that "great success" appears in 50% of reliability after that.

[0026] Like the 1st mode of the above, therefore, a game person By matching and recognizing the 2nd pattern displayed previously and the 1st pattern displayed after that By determining the 2nd pattern corresponding to the 1st pattern at random in addition to the ability knowing how much possibility of being in the condition that profits are given there are, a game person will also perform the game which expects the display of the 2nd pattern used as profits, and the interest of a game is raised further.

[0027] the 3rd voice -- if it depends like, since the 2nd pattern consists of the combination of two or more patterns, various patterns showing the probability which will be in the condition that profits are given to a game person which should be displayed can be boiled and set up. For this reason, since a probability can be expressed finely and presentation of fine information is carried out to a game person, interest is raised further.

[0028] A game person cannot recognize the probability which will be in the condition that profits are given, but he will take notice of a display, expecting what the probability becomes until the 2nd whole pattern is displayed, since according to the 4th mode a pattern display-control means shifts some of the display stages and displays the 2nd pattern.

[0029] Since according to the 5th mode the same pattern is continued and determined until the 2nd indicator-chart shank decision means will be in the condition of giving a game person profits, while the same pattern continues and is displayed, a game person can recognize that it is in the condition that profits are given, and can perform a game on the basis of sense of security.

[0030] According to the 6th mode, since it is displayed until just before the condition that profits are given to a game person by the 1st pattern group is shown, after the 2nd pattern disappears, the 1st pattern group which expresses a pattern specially can recognize the 2nd pattern clearly, while different interest is conventionally acquired for a game person.

[0031] Since the 1st and 2nd random numbers are generated corresponding to an input signal which swerves,

and swerves and is different according to the 7th mode, the generating stage of a random number can be changed. For this reason, that the 1st pattern and 2nd pattern become the same combination decreases, and discernment of a pattern can be performed easily.
[0032] Furthermore, according to this invention, the game machine which does so the same effectiveness as the above-mentioned display using the liquid crystal display prepared in the conventional game machine or its control unit is offered.
[0033]
[Embodiment of the Invention] Drawing 1 shows the display for games equivalent to the 1st mode of this invention. This consists of the following components.
[0034] The 1st pattern group showing being in a random-number-generation means 101 to generate a random number according to a predetermined input signal, a judgment means 102 to judge whether the 1st random number generated from this random-number-generation means 101 is a predetermined value, and the condition that profits are given to a game person, It is based on the judgment result of the pattern storage means 104 and the judgment means 102 of having matched and stored the 2nd pattern group showing the probability which will be in the condition that profits are given to a game person. Determine the 1st pattern which should be displayed out of the 1st pattern group stored in the pattern storage means 104, and it corresponds to the 1st pattern. With the indicator-chart shank decision means 103 and the above-mentioned indicator-chart shank decision means 103 of determining the 2nd pattern which should be displayed out of the 2nd pattern group stored in the pattern storage means 104 A pattern display-control means 106 to control the pattern display means 107 to display the 1st pattern after displaying a pattern display means 107 to display the 1st and 2nd determined patterns, and the 2nd pattern determined as mentioned above.
[0035] In the above-mentioned configuration, the 1st pattern group and the 2nd pattern group which are stored in the pattern storage means 104 correspond as follows.
[0036] The 1st pattern showing being in the game condition that profits are given to a game person, as shown in drawing 2 is "7-7-7" (great success), "7-7-6", "7-7-5", --, "6-6-6", and --. It is stored as data showing the combination of the pattern of a figure [like] or an alphabetic character, and a pattern and others. The 1st pattern group is constituted by the combination of the 1st pattern (specially pattern) expressed by these data. The 2nd pattern showing the probability which will be in the condition that profits are given to a game person, on the other hand corresponds to each combination of the 1st pattern (specially pattern) of the above, and is the combination (A) of a predetermined pattern, (B), --, (X), and --. It is stored as data which express.
[0037] In the example shown in drawing 2 , although the 2nd pattern (A), (B), --, (X) support "7-7-7" (great success) of the 1st pattern group, "7-7-6", --, "6-6-6" by 1 to 1, respectively The 2nd pattern (A) supports the 3rd "the 7-7-5" of the 1st pattern group. Therefore, when the 2nd pattern (B) or (X) is displayed previously as mentioned above, the 1st pattern displayed after that is the specific pattern "7-7-6" in which it corresponded with the 2nd pattern concerned, or "6-6-6", and each appearance probability is 100%. However, since the 1st pattern displayed after that is "7-7-7" which corresponded with the 2nd pattern concerned, or "7-7-5" when (A) is displayed as the 2nd pattern, the probability for "7-7-7" (great success) to appear after the display of the 2nd pattern (A) is 50%.
[0038] In this way, a game person can predict the rate what kind of 1st pattern appears, when the 2nd pattern is displayed.
[0039] Next, drawing 3 shows the display for games equivalent to the 2nd mode of this invention. This consists of the following components (the same sign is given to the same thing as drawing 1).
[0040] As opposed to a random-number-generation means 101 to generate a random number according to a predetermined input signal, a judgment means 102 to judge whether the 1st random number generated from this random-number-generation means 101 is a predetermined value, and a game person It is based on the judgment result of the pattern storage means 104 and the judgment means 102 of having stored the 2nd pattern group showing the probability which will be in the condition that profits are given to the 1st pattern group and game person showing being in the condition that profits are given. 1st indicator-chart shank decision means 103a which determines the 1st pattern which should be displayed out of the 1st pattern group stored in the pattern storage means 104, It is based on the judgment result of the judgment means 102, and the 2nd random number generated from the random-number-generation means 101. 2nd indicator-chart shank decision means 103b which determines the 2nd pattern which should be displayed out of the 2nd pattern group stored in the pattern storage means 104, After displaying a pattern display means 107 to display the 1st and 2nd patterns determined

by the 1st and 2nd indicator-chart shank decision means 103a and 103b, and the 2nd pattern determined by indicator-chart shank decision means 103of ** 2nd b, A pattern display-control means 106 to control the pattern display means 107 to display the 1st pattern determined by 1st indicator-chart shank decision means 103a.
[0041] In the configuration of drawing 3 , the 1st pattern group and the 2nd pattern group which are stored in the pattern storage means 104 correspond as follows.
[0042] it is shown in drawing 4 -- as -- the 1st pattern -- the example of drawing 2 -- the same -- "7-7-7" (great success), "7-7-6", "7-7-5", --, ** -- it is stored as data showing the combination of the pattern of a figure [like] or an alphabetic character, and a pattern and others. The 1st pattern group is constituted by the combination of the 1st pattern (specially pattern) expressed by these data. On the other hand, two or more patterns (put together) correspond to each combination of the 1st pattern (specially pattern) of the above, and the 2nd pattern is stored in it, respectively. That is, (B), (E), and -- support to "7-7-6", and (A), (C), and -- support [the 2nd pattern (A) (D), and --] "7-7-5" "7-7-7" (great success) of the 1st pattern group, respectively. And in this example, the 2nd pattern (A) supports the 3rd "the 7-7-5" other than the 1st "the 7-7-7" of the 1st pattern group.
[0043] According to the above-mentioned configuration, when the 1st pattern is determined by the value of the 1st above-mentioned random number, the 2nd pattern is determined by the value of the 2nd random number out of the 2nd pattern group corresponding to it. Therefore, although (A) or (D) is displayed as the 2nd pattern when the 1st determined pattern is "7-7-7" Since "7-7-7" is surely displayed after that when (D) is displayed, it turns out that "7-7-7" appears to a game person in 100% of probability by the display of (D). However, since "7-7-7" or "7-7-5" may be displayed after that when (A) is displayed as the 2nd pattern, it turns out that "7-7-7" appears to a game person in 50% of probability by the display of (A).
[0044] In this way, a game person can predict what kind of 1st pattern appears and its rate, when the 2nd pattern is displayed, and also he can enjoy the game of looking for the 2nd pattern which makes the 1st pattern which serves as profits for a game person surely appearing.
[0045] In addition, with the configuration of drawing 3 , the pattern display-control means 106 includes the pattern fluctuation means 110 constituted possible [activation of the pattern halt actuation which carries out the deactivate indication of the 1st pattern], after displaying the 2nd pattern on the pattern display means 107, and it indicates the 1st pattern group by fluctuation.
[0046] Furthermore, the display of drawing 3 for games has a pattern halt actuation decision means 108 opt for either of the pattern halt actuation set up with the above-mentioned pattern halt actuation setting means 109, based on the 3rd random number which generated pattern halt actuation from the pattern halt actuation setting means 109 in which a multi-statement is possible, and the judgment result of the above-mentioned judgment means 102, the 2nd random number and a random-number-generation means.
[0047] In the above-mentioned configuration, the random-number-generation means 101 has the 1st, 2nd, and 3rd random-number-generation circuit section 101a, 101b, and 101c which generates a random number according to an input signal, respectively. When the signal of 1 is inputted, these three random numbers are generated in coincidence, or may change each generating stage. Moreover, as the broken line showed, the 2nd and 3rd random number may be generated according to the not an input signal but 2nd and 3rd input signal of 1. In this case, as an input signal with which plurality differs, the signal generated by winning a prize to the signal generated when a game ball wins a prize of starting winning-a-prize opening in the below-mentioned pachinko game machine, or other winning-a-prize openings, or pattern fluctuation initiation is used, for example.
[0048] About the 1st random number generated from 1st random-number-generation circuit section 101a, it is judged whether it is a random-number value predetermined with the judgment means 102, and the 1st pattern which should be displayed out of the 1st pattern group stored in the pattern storage means 104 by 1st indicator-chart shank decision means 103a is determined based on the judgment result.
[0049] Moreover, the judgment result about the 1st random number (that is, the 1st pattern determined as what should be displayed in the 1st pattern group), Based on the 2nd random number generated from 2nd random-number-generation circuit section 101b, the 2nd pattern which should be displayed out of the 2nd pattern group stored in the pattern storage means 104 by 2nd indicator-chart shank decision means 103b is determined. Therefore, the display of the 2nd pattern is attained corresponding to the result of the 1st pattern. Here, when the 1st pattern is determined that it will constitute the combination of the advantageous pattern for a game person, it can perform easily determining that the 2nd pattern will also constitute the combination of the advantageous pattern concerned.
[0050] The 1st pattern which shows that it is in the condition that profits are given to a game person as

mentioned above, and the 2nd pattern showing the probability for this 1st pattern to appear are beforehand stored in the pattern storage means 104 as 1st and 2nd pattern group, respectively.

[0051] About the 1st pattern and 2nd pattern which were determined as mentioned above, after the pattern display means 107 displays the 2nd pattern, the display control of the pattern display-control means 106 is carried out so that the 1st pattern may be displayed. Thereby, prediction what kind of 1st pattern is displayed corresponding to the 2nd pattern of a game person is attained. Furthermore, possibility that the 1st pattern will be displayed can be known according to the contents of a display of the 2nd pattern.

[0052] Moreover, according to the configuration of drawing 3 , after the fluctuation display of the 1st pattern group is started, adjustable display halt actuation until the deactivate indication of the 1st pattern is carried out can be sorted out. That is, with the pattern halt actuation decision means 108, from the 3rd random-number value and the judgment result in the judgment means 102, it opts for either of the pattern halt actuation set as the pattern halt actuation setting means 109, the pattern fluctuation means 110 of the pattern display-control means 106 is operated according to the pattern halt actuation, and the deactivate indication of the 1st pattern is carried out to the pattern display means 107.

[0053] Therefore, since a game person predicts halt actuation of the 1st pattern with the 2nd pattern and also makes the judgment result of the judgment means 102 conditions at the decision of the halt actuation, he can express the probability of occurrence of the 1st pattern in halt actuation.

[0054] Next, the example which applied the indicating equipment for games of this invention to the display means of a pachinko game machine is explained.

[0055] Drawing 5 is the front view showing an example of the game face of a board of a pachinko game machine. Drawing 1 or the indicating equipment for games of drawing 3 is used as a special pattern display means in this pachinko game machine 1. In this case, the random-number-generation means 101 in drawing 1 or drawing 3 It consists of random-number-generation circuits 53 shown in below-mentioned drawing 6 . The judgment means 102, the indicator-chart shank decision means 103 (or 1st [the], the 2nd indicator-chart shank decision means 103a and 104b), The pattern storage means 104, the pattern display-control means 106, the pattern halt actuation decision means 108, and the pattern halt actuation setting means 109 consist of below-mentioned microcomputers 50, and the pattern display means 107 consists of pattern displays 3 specially.

[0056] Specially, the pattern display 3 consists of liquid crystal displays, and displays the pattern on the rotation reel of three trains of a slot machine on this display screen in false with an electrical signal as a "special pattern" equivalent to the 1st pattern in this invention. In addition, electric indicators, such as an indicator which arranged and constituted much LED as a pattern indicating equipment 3 specially, and CRT, a plasma display, can also be used.

[0057] In the game face of a board 10 of this pachinko game machine 1, the below-mentioned gates 6a and 6b for common pattern actuation appointed at making the adjustable display of the pattern display 2 usually start are specially established in right and left of the lower part of the pattern display 3, and the switches 7a and 7b for pattern actuation usually detect passage of a game ball respectively.

[0058] It consists of adjustable winning-a-prize equipment convertible into the 1st condition disadvantageous for a game person for the lower part of the pattern display 3, and the 2nd advantageous condition for a game person specially. The starting winning-a-prize opening 4 set to pay out the awarded balls of the predetermined number (for example, five pieces) if a game ball wins a prize of this (the so-called start hole), If it consists of fluctuation winning-a-prize equipment of a door closing motion type convertible into a disadvantageous closed state and the advantageous open condition for a game person and a game ball wins a prize of this for a game person, the large winning-a-prize opening (the so-called attacker) 5 which pays out the awarded balls of the predetermined number (for example, 15 pieces) is formed. In addition, even if the starting winning-a-prize opening 4 is in the 1st disadvantageous condition, it holds the winning-a-prize space where about one game ball can win a prize.

[0059] The pattern display 2 is usually formed in the lower part of the game face of a board 10, and four pattern storage lamps 14 are usually formed around it. When [this] a game ball usually wins a prize of the gates 6a and 6b for pattern actuation as an example of a specific region, the light is switched on, and the pattern storage lamp 14 usually shows the count of the pattern display 2 which can be pattern changed. That is, the midst to which the pattern of the pattern display 2 is usually changed is made to memorize 4 times for the count which usually won a prize of gate 6for pattern actuation a, or 6b as an upper limit, and a game person is told about the count in the time in which pattern fluctuation of the pattern display 2 is usually possible.

[0060] In addition, four special pattern storage lamps 15 made to memorize as an upper limit are formed [times / 4] in the midst by which a fluctuation indication of the pattern is specially given also to the pattern display 3 in the count which won a prize of the starting winning-a-prize opening 4.
[0061] Furthermore, on the game face of a board 10, whenever there are 12a, 12b, and the winning-a-prize ball which are the wind mills 11a and 11b with a lamp equipped with the light-emitting part and the usual wind mill, the general winning-a-prize openings 13a, 13b, 13c, 13d, 13f, and 13g, the face-of-a-board side lamps 14a and 14b, etc. which pay out a game person 15 awarded balls are formed.
[0062] Unitization of the common pattern display 2, the above-mentioned starting winning-a-prize opening 4, and the above-mentioned large winning-a-prize opening 5 is carried out to one as adjustable winning-a-prize ball equipment 9, and they are installed in the game face of a board. In this adjustable winning-a-prize ball equipment 9, whenever there is a winning-a-prize ball, the general winning-a-prize openings 13f and 13g, the starting winning-a-prize opening 4, and the large winning-a-prize opening 5 which pay out a game person the awarded balls of the predetermined number (for example, 15 pieces) are prepared. And the starting winning-a-prize opening switch 31 (drawing 6) is formed as a means to detect the game ball which won a prize of the starting winning-a-prize opening 4.
[0063] This pachinko game machine is equipped with a microcomputer as a control unit, and controls a game at large by this. As the control unit of this example is also shown in drawing 6 , it is constituted centering on a microcomputer.
[0064] A microcomputer 50 consists of CPU50A, RAM50B, ROM50C, and IC50D only for I/O (I/O), processes various kinds of input signals inputted from an input circuit 51 in accordance with the program in which it was written in ROM50C, and sends out an output signal to each driving means from an output circuit 52 if needed. Moreover, the random-number-generation circuit 53 is connected to CPU50A as a random-number-generation means to generate the random-number value used with the advance process of a game, and the display of this invention. In addition, the means inside CPU which generates a random number not only the external random-number-generation circuit 53 but on a program is sufficient as a random-number-generation means. Moreover, although the example of drawing 6 has a game and composition which controls an omen display action etc. by one CPU, you may make it share game control and control of an omen display etc. with two CPUs. For example, one CPU shall perform random number generation for games, and another CPU shall perform random number generation for the above pattern displays.
[0065] As a means to generate the input signal shown in drawing 1 or drawing 3 in an input circuit 51, said switches 7a and 7b for common pattern actuation and the starting winning-a-prize opening switch 31 are connected, and the pattern display 2 and the special pattern display 3 are usually connected to the output circuit 52.
[0066] Drawing 7 shows the processing which determines the "omen pattern" of the above-mentioned pachinko game machine specially displayed on the pattern display 3 as the 2nd pattern in this invention. It is shown that the above "a special pattern" serves as a pattern (put together) of great success 100%, and a deactivate indication is carried out by the omen pattern which an omen pattern is a pattern in which the condition that profits are given to a game person here is made to spring up beforehand, and is displayed, or that the probabilities for great success to appear are 50% and 5%.
[0067] In the case of the above-mentioned pachinko game machine, CPU of a microcomputer 50 performs processing of drawing 7 . If there are introduction and an input signal (for example, signal from the starting winning-a-prize opening switch 31 which detects the winning-a-prize ball to the starting winning-a-prize opening 4) (ST101), the random number (equivalent to the 1st random number with the configuration of drawing 3) for determining whether stop a pattern in a specific mode specially will be generated (ST102). Furthermore, the random number (equivalent to the 2nd random number with the configuration of drawing 3) for determining an omen pattern is generated (ST103). In addition, generating of a random number is good on condition that the arbitration according to the form and the class of winning a prize not only to winning a prize to starting opening but other winning-a-prize openings, and other game machines.
[0068] Next, "great success" judging processing is performed (ST104), and the special pattern which carries out a deactivate indication is determined (ST105). Then, the "reach production" which is a kind of pattern halt actuation is determined (ST106). Here, it opts for specially different deactivate indication actuation (the so-called reach action) from the deactivate indication-usually actuation at the time of a pattern based on the value of the random number generated as a random number for production decision which is equivalent to the 3rd

random number in drawing 3 , and the result of the above-mentioned great success judging. That is, the pattern of reach action which corresponds [from] with the above-mentioned pattern halt actuation decision means 108 among the halt actuation set up with the pattern halt actuation setting means 109 is determined.

[0069] An omen pattern in case reach action is performed here By the case where they are the case where the result of a hit judging is "a hit" as DS for determining an omen pattern since reach action displays the probability for great success to appear after that, to a game person, and a "blank" The pattern table which defined the omen pattern according to the pattern of the class of special pattern and reach action by which a deactivate indication is carried out, respectively is prepared beforehand (it stores in a storage means).

[0070] In processing of drawing 7 , one table for omen pattern selection is determined out of the above-mentioned pattern table (ST107), and the table for omen pattern selection and the random number for omen pattern decision generated in the above ST 103 are collated, and the omen pattern which should be displayed is determined (ST108) and it returns first.

[0071] Next, the example of the display process of the omen pattern and special pattern which were determined as mentioned above is explained below with reference to drawing 8 .

[0072] the timing which starts the fluctuation display of the "special pattern" as the 1st pattern in the existence (for example, turning on and off of a starting winning-a-prize pilot switch) of an input signal which makes the most significant of each drawing of drawing 8 - drawing 10 start the fluctuation display of a pattern specially, and the bottom of it, and the timing which carries out a deactivate indication -- in the bottom of it, initiation of the display action of the "omen pattern" as the 2nd pattern and the timing of termination are shown further, respectively. in addition -- although a certain omen pattern is displayed whenever the following examples indicate the pattern by fluctuation specially -- specially -- fluctuation of a pattern -- 2 times -- or whenever it is carried out 3 times, a first half [of the 1st inning] omen pattern may be made to be shown.

[0073] First, in the example of drawing 8 , when an input signal occurs, the special patterns A, B, and C of three trains start fluctuation to coincidence, and Pattern C stops for Pattern A first after predetermined time, and then they stop at Pattern B and the last specially, respectively. In this case, since it becomes "reach decision" when [2nd] Pattern B stops specially, an omen pattern is specially displayed from the time of fluctuation initiation of a pattern till reach decision.

[0074] Moreover, in the example of drawing 9 , even if an input signal occurs, fluctuation of the special patterns A, B, and C of three trains is not started immediately, but the fluctuation display of three special patterns is started after predetermined time. In this case, the time amount to fluctuation initiation of a pattern and an omen pattern are specially displayed from generating of an input signal.

[0075] Next, in drawing 10 , like drawing 8 , although the display of an omen pattern is specially performed between the fluctuation displays of a pattern, a pattern is specially, constituted so that it may appear in each of the upper case in the display screen of an indicating equipment (in the case of the pachinko game machine of drawing 5 specially pattern indicating equipment 3), the middle, and the lower berth.

[0076] In this case, t1 When the display omits the fluctuation display in the condition that the power source of a game machine is on so that it may be shown, as shown in drawing 11 , the deactivate indication of the pattern is carried out specially. The triple figures special pattern group of the continuation figure to "0" - "9" is expressed as the screen of this display, for example. In the example of illustration, it has ranked with "5-1-3" in the middle. At this time, the character which is unrelated to a pattern specially may be displayed.

[0077] The following t2 At the time, according to the ON signal of the starting winning-a-prize opening switch 31, as shown in drawing 12 , fluctuation of a pattern has started specially in the direction of Downarrow. In addition, the part enclosed with the circle of the alternate long and short dash line in drawing shows the special pattern changed at the rate which a game person cannot recognize.

[0078] The following t3 The display of an omen pattern is started at the time. The omen pattern constitutes the 2nd pattern group from four patterns, a "arrow head", a "star", the "moon", and a "bird", shown in drawing 13 (A) - (D). In addition, a pattern group may be one pattern which does not mean only these four single patterns (simple substance), and was made combining these patterns.

[0079] Above t3 At the time, as shown in drawing 14 , one the "arrow head" of an omen pattern appears in the middle of the display screen, and the display which moves toward the left is performed. In addition, although a total of nine patterns are displayed under Kaminaka in the following examples of a display in three steps, two steps or one step of display or four or more steps of pattern displays are sufficient.

[0080] Next, t4 At the time, as shown in drawing 15 , the omen pattern of an upper case and the lower berth is

also displayed, and it is t5 after that. If three patterns of the middle are located in a line as shown in drawing 16 , migration of a pattern will stop only the middle. And a game person enables recognition of a halt pattern by carrying out a fixed period halt. At this time, the pattern of an upper case and the lower berth is moving.
[0081] An omen pattern is t6 the time of a total of nine patterns being located in a line, as three patterns come out fully as mentioned above and it is shown in drawing 17 . It stops as a whole. Although fixed time amount continuation of the halt of the pattern of each stage is carried out, the stop time can be set as arbitration. Thus, all the specific modes present fluctuation on display a pattern indicates great successes to be specially, for example, the pattern group of triple figures, can serve as the same numeric value (3-3-3), and a game person can be made to recognize the probability which carries out a deactivate indication by carrying out the deactivate indication of the nine patterns. That is, the combination of an omen pattern expresses a probability.
[0082] When fixed time amount after a deactivate indication of an omen pattern passes as mentioned above, it is t7 of drawing 10 . At the time, as shown in drawing 18 , an omen pattern moves leftward from the pattern of the middle, and disappears from the display screen. Furthermore, the following t8 At the time, as shown in drawing 19 , the pattern of an upper case and the lower berth also indicates by migration, and disappears from the display screen one by one. And when all the omen patterns disappear, the deactivate indication of the special pattern fluctuation on display [above-mentioned] is carried out.
[0083] In the above-mentioned example of a display, when all of nine patterns by which the deactivate indication was carried out like drawing 17 are the same "arrow heads", the display control of the pattern is specially carried out so that "3-3-3" may be certainly located in a line (by 100% of probability). That is, the indicator-chart shank of drawing 17 is a display which carries out the omen of "great success" coming out.
[0084] It can express that the probability for "great success" to come out is 50% by displaying the "moon" on the upper case right, displaying a "stellar" pattern on the lower-berth left, as shown in drawing 20 , and otherwise, making the remainder into the pattern of a "arrow head."
[0085] Moreover, as shown in drawing 21 , when a "star" is displayed on the center of the middle, and the right-and-left location of the lower berth and the remainder is displayed as a "arrow head" As the probability of the above-mentioned reach action is 50% and it is shown in drawing 22 , when a "star" is displayed on the right of an upper case on the left of a "bird" and the lower berth in the center of a "star" and the middle and the remainder is displayed as a "arrow head", it shall be shown that the probability for reach action to occur is 100%. Thus, a probability can be displayed by making the combination of an indicator-chart shank correspond to the probability of arbitration.
[0086] On the other hand, when a pattern is specially displayed by the pattern of "great success" located in a line with "7-7-7", the game to which Kaisei of the large winning-a-prize opening 5 usually made only once is carried out as special profits shall be made 3 times, for example. At this time, after 1 time of a game, a pattern is changed specially again, and it makes higher than usual the probability by which a deactivate indication is carried out by becoming the same [triple figures], and considers as a condition advantageous to a game person. And as this advantageous condition is shown in drawing 23 as a display which carries out an omen to a game person, a "star" is displayed in Hidari of the middle, and the center, the pattern of the "moon" is displayed on the right, and the remainder is displayed as a "arrow head."
[0087] In addition, the omen pattern to which the probability of great success for a pattern to be displayed specially becomes low is good also as a "null" which nothing displays. Moreover, although nine patterns are regularly located in a line in the above-mentioned example, it is also possible to express a probability with shifting and displaying that a location can recognize any one pattern clearly. Moreover, the same thing as the pattern currently specially used in the pattern may be used as a part of omen pattern.
[0088] When the above omen patterns are the things to which reach action is made to perform, reach action shown in drawing 24 and drawing 25 is performed.
[0089] Drawing 24 shows the display screen in the reach condition to which "a woman's face" was located in a line with the upper case, and two "7" was located in a line with 2 lists and the lower berth. Although Hidari and an inner column have stopped here, the right column shows reach that it is under [fluctuation display] saying action.
[0090] As for drawing 25 , "a man's face" shows 2 ****** reach condition to an upper case. Here, the "reach" which tells a reach condition, and the drawn pattern are displayed on these patterns in piles, and like the display of drawing 24 , only a right column indicates by fluctuation and is enlivening a game person's interest.
[0091] Then, when the pattern by which the deactivate indication was carried out becomes a specific pattern

combination (great success), count Kaisei of predetermined of the large winning-a-prize opening is carried out, and it will be in the condition that a game person tends to gain a lot of awarded balls.
[0092] Although the above example is the case where the indicating equipment of this invention is used for a pachinko game machine, it can apply this invention similarly to other game machines, for example, TV game machine equipped with the slot machine equipped with the electric indicating equipment, or other image equipments.

[Translation done.]

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3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] The block diagram showing the configuration of the indicating equipment for games of the 1st mode of this invention.
[Drawing 2] Drawing showing the correspondence relation between the 1st pattern and the 2nd pattern in the configuration of drawing 1 .
[Drawing 3] The block diagram showing the configuration of the indicating equipment for games of the 2nd mode of this invention.
[Drawing 4] Drawing showing the correspondence relation between the 1st pattern and the 2nd pattern in the configuration of drawing 3 .
[Drawing 5] The front view showing the game face of a board of the pachinko game machine using the indicating equipment of this invention.
[Drawing 6] The block diagram showing the configuration of the electrical circuit section of a pachinko game machine.
[Drawing 7] The flow chart for explaining omen pattern decision procedure.
[Drawing 8] The timing diagram which shows an example of the display period of an omen pattern and a special pattern.
[Drawing 9] The timing diagram which shows another example of the display period of an omen pattern and a special pattern.
[Drawing 10] The timing diagram which shows the display period in the case of displaying an omen pattern in three steps.
[Drawing 11] Drawing showing the deactivate indication condition of the special pattern in the display screen.
[Drawing 12] Drawing showing the fluctuation display condition of a pattern specially.
[Drawing 13] Drawing showing the example of an omen pattern.
[Drawing 14] the display screen -- drawing showing the migration display condition of the omen pattern of the middle.
[Drawing 15] Drawing showing the migration display condition of the omen pattern of an upper case and the lower berth.
[Drawing 16] Drawing showing the idle state of the omen pattern of the middle.
[Drawing 17] Drawing showing the idle state of the omen pattern of the middle, an upper case, and the lower berth.
[Drawing 18] Drawing showing the condition that the halt pattern of the middle carried out migration initiation.
[Drawing 19] Drawing showing the condition that the omen pattern of an upper case besides the middle and the lower berth disappears from the screen.
[Drawing 20] Drawing showing an omen pattern in case the probability for great success to appear is 50%.
[Drawing 21] Drawing showing the omen pattern in the case of 50% of probability of occurrence of reach action.
[Drawing 22] Drawing showing the omen pattern in the case of 100% of probability of occurrence of reach action.
[Drawing 23] Drawing showing the omen pattern in probability fluctuation.
[Drawing 24] Drawing showing the example of a display of reach action of a pattern specially.
[Drawing 25] Drawing showing other examples of a reach action display.
[Description of Notations]

1 -- A pachinko game machine, 2 -- It is usually a pattern display and 3. -- Specially Pattern display, 4 -- Starting winning-a-prize opening, 5 -- Large winning-a-prize opening, 7a, 7b -- Usually The switch for pattern actuation, 31 -- A starting winning-a-prize opening switch, 10 -- The game face of a board, 50 -- Microcomputer, 50 A--CPU, 50 B--RAM, 50 C--ROM, 53 [-- An indicator-chart shank decision means 104 / -- A pattern storage means, 106 / -- A pattern display-control means, 107 / -- Pattern display means.] -- A random-number-generation circuit, 101 -- A random-number-generation means, 102 -- A judgment means, 103

[Translation done.]

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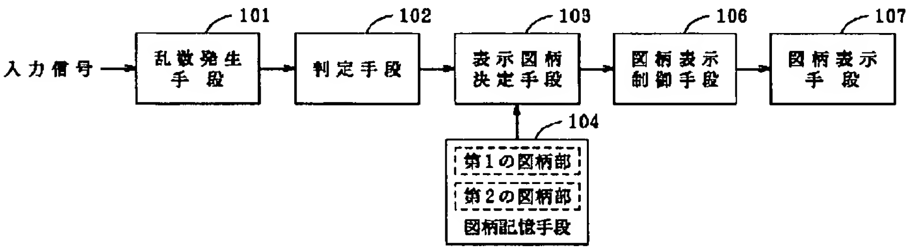
DRAWINGS

[Drawing 1]

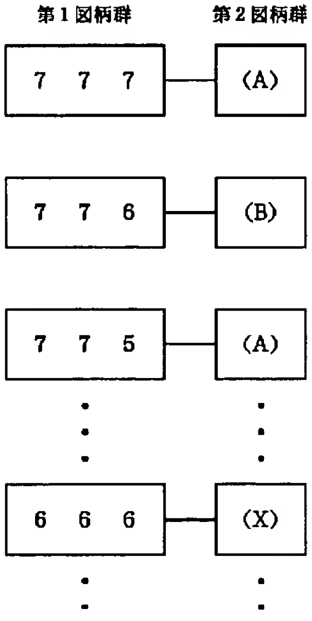
FIG.1


入力信号
101
乱数発生手段
102
判定手段
103
表示図柄決定手段
106
図柄表示制御手段
107
図柄表示手段
104
第1の図柄部
第2の図柄部
図柄記憶手段

[Drawing 2]

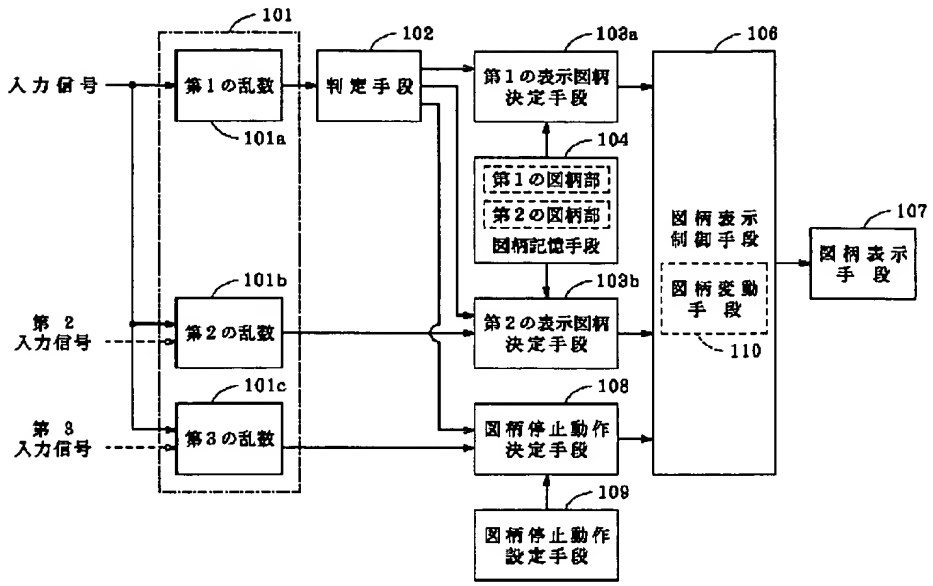
FIG.2

(1つの乱数使用)

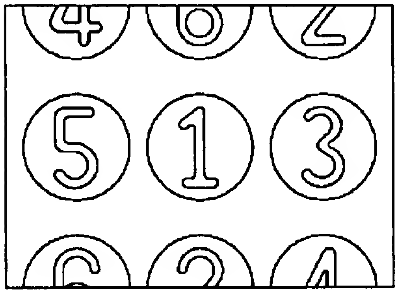

第1図柄群
第2図柄群
7 7 7
(A)
7 7 6
(B)
7 7 5
(A)
6 6 6
(X)

[Drawing 3]

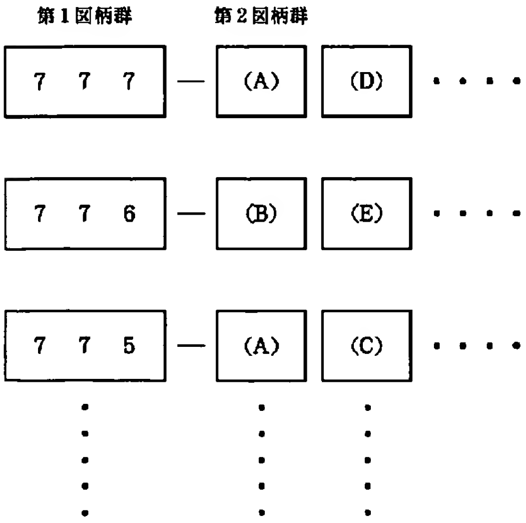
FIG.3


101
102
103a
106
入力信号
第1の乱数
判定手段
第1の表示図柄決定手段
101a
104
第1の図柄部
第2の図柄部
図柄記憶手段
図柄表示制御手段
107
図柄表示手段
101b
103b
図柄変動手段
第2入力信号
第2の乱数
第2の表示図柄決定手段
110
101c
108
第3入力信号
第3の乱数
図柄停止動作決定手段
109
図柄停止動作設定手段

[Drawing 11]
FIG.11

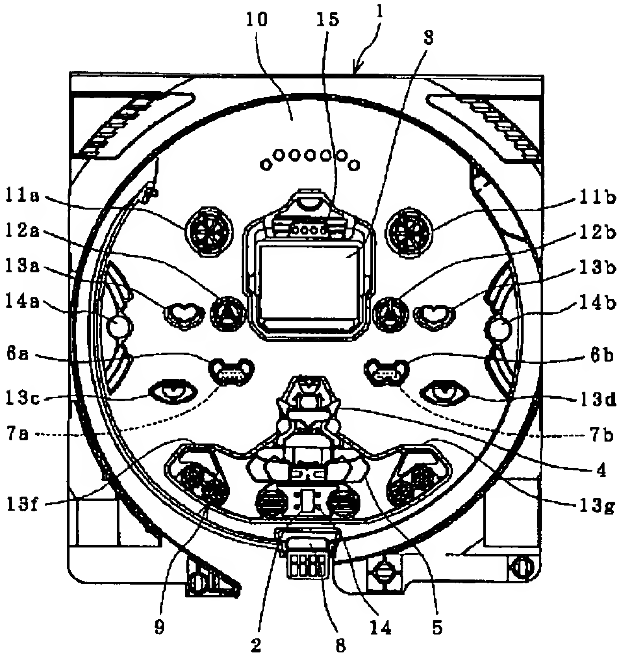


[Drawing 4]
FIG.4
（2つの乱数使用）


第1図柄群
第2図柄群
7 7 7
(A)
(D)
7 7 6
(B)
(E)
7 7 5
(A)
(C)

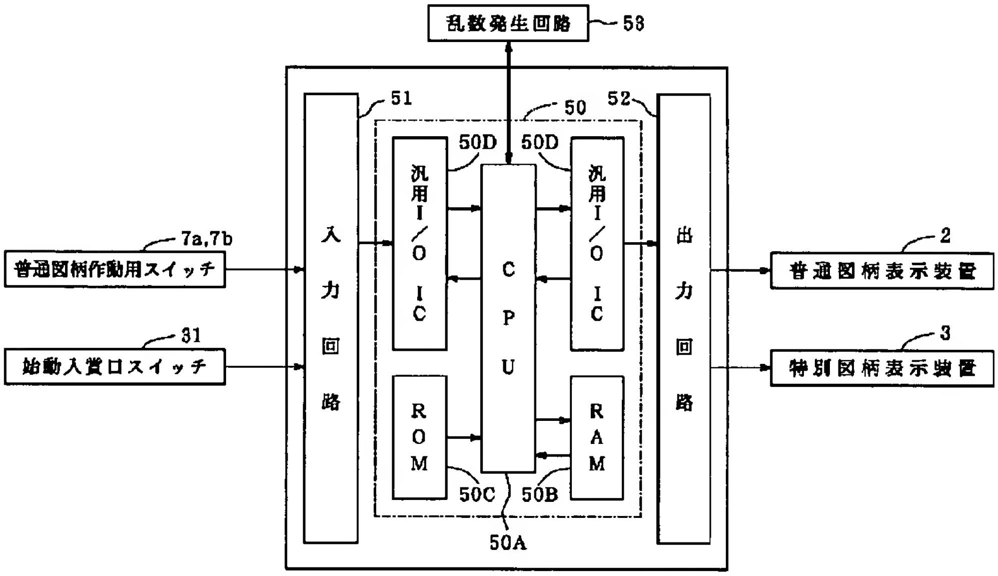
[Drawing 5]

FIG.5


10
15
1
3
11a
12a
13a
14a
6a
13c
7a
13f
11b
12b
13b
14b
6b
13d
7b
4
13g
9
2
8
14
5

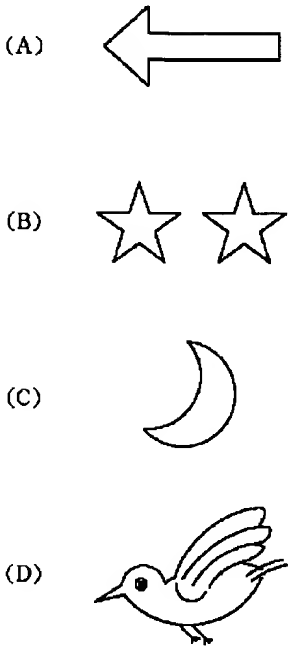
[Drawing 6]

FIG.6


乱数発生回路
53
51
50
52
50D
50D
汎用I/O IC
汎用I/O IC
CPU
ROM
RAM
50C
50B
50A
入力回路
出力回路
7a,7b
普通図柄作動用スイッチ
31
始動入賞口スイッチ
2
普通図柄表示装置
3
特別図柄表示装置

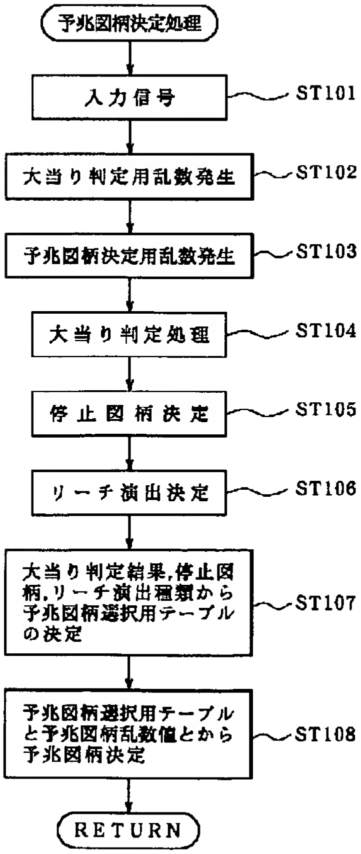
[Drawing 13]

FIG.13



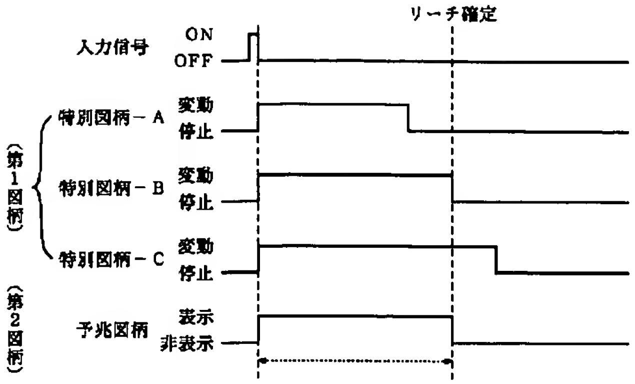
[Drawing 7]

FIG.7


予兆図柄決定処理
入力信号
ST101
大当り判定用乱数発生
ST102
予兆図柄決定用乱数発生
ST103
大当り判定処理
ST104
停止図柄決定
ST105
リーチ演出決定
ST106
大当り判定結果,停止図柄,リーチ演出種類から予兆図柄選択用テーブルの決定
ST107
予兆図柄選択用テーブルと予兆図柄乱数値とから予兆図柄決定
ST108
RETURN

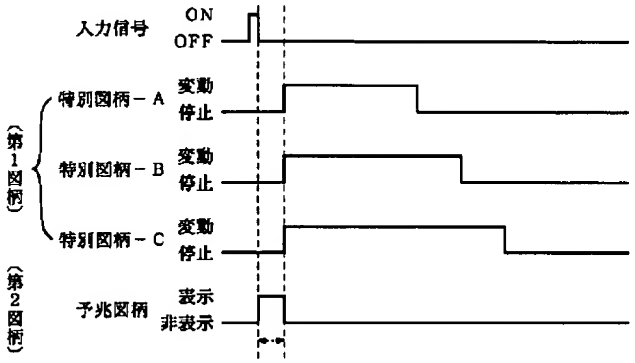
[Drawing 8]

FIG.8


リーチ確定
入力信号
ON
OFF
（第1図柄）
特別図柄－A
変動
停止
特別図柄－B
変動
停止
特別図柄－C
変動
停止
（第2図柄）
予兆図柄
表示
非表示

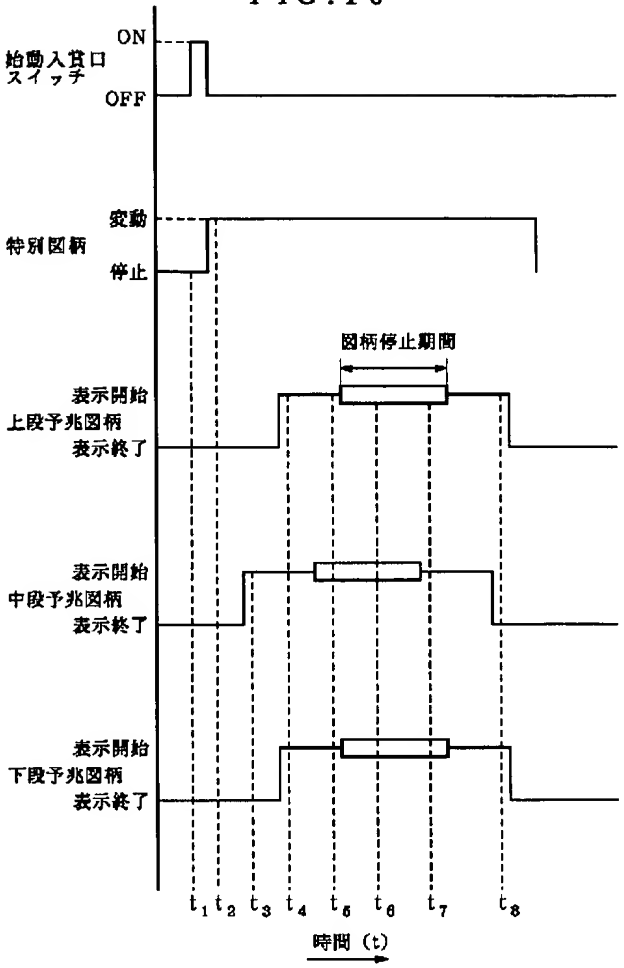
[Drawing 9]

FIG.9

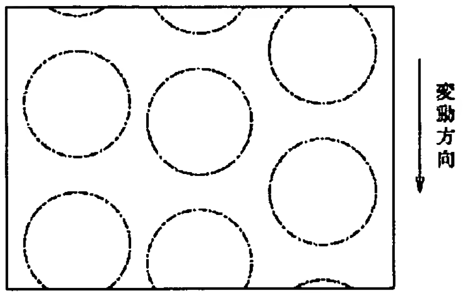

入力信号
ON
OFF
（第1図柄）
特別図柄－A
変動
停止
特別図柄－B
変動
停止
特別図柄－C
変動
停止
（第2図柄）
予兆図柄
表示
非表示

[Drawing 10]

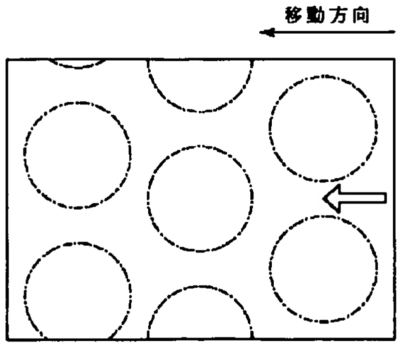
FIG.10



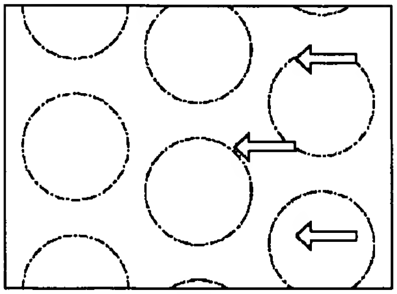
[Drawing 12]
FIG.12



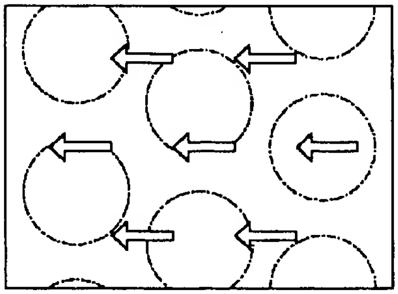
[Drawing 14]
FIG.14



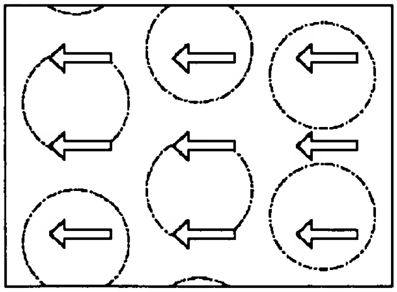
[Drawing 15]
FIG.15



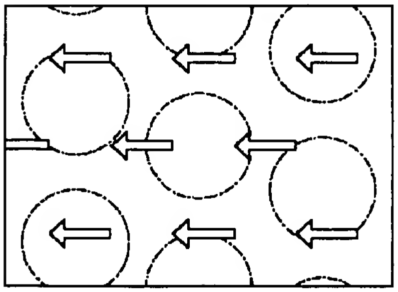
[Drawing 16]
FIG.16



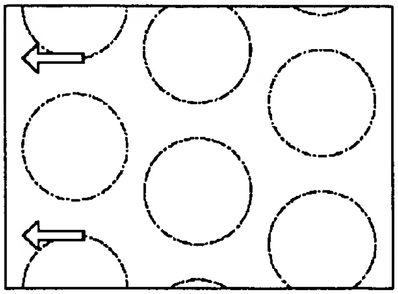
[Drawing 17]
FIG.17



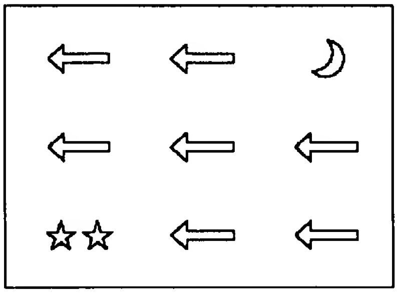
[Drawing 18]
FIG.18



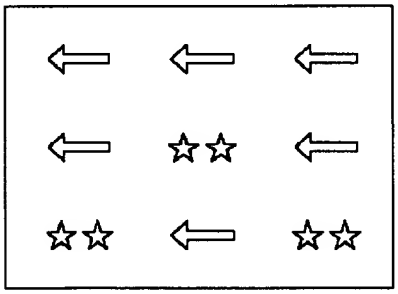
[Drawing 19]
FIG.19



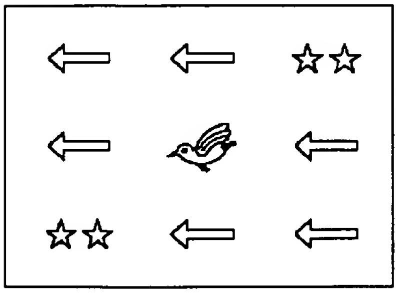
[Drawing 20]
FIG.20



[Drawing 21]
FIG.21

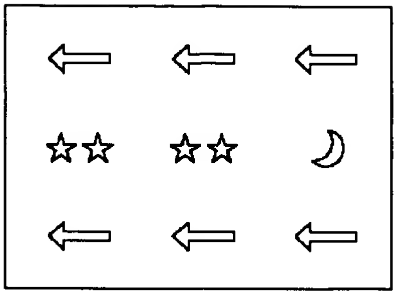


[Drawing 22]
FIG.22

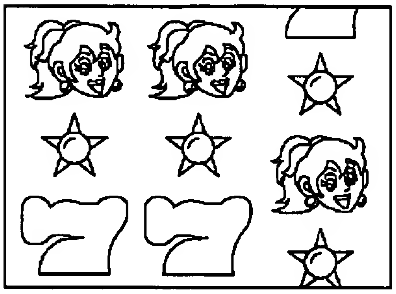


[Drawing 23]

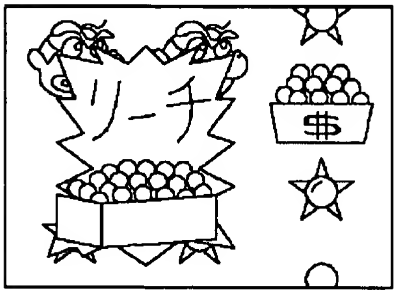
FIG.23



[Drawing 24]
FIG.24



[Drawing 25]
FIG.25



[Translation done.]